

Amendments to the Claims:

Claim 27 has been canceled and claims 24, 26, and 28-31 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below. Please enter these claims as amended. This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claims 1-23. (Canceled)

24. (Currently Amended) ~~A printed circuit board~~ An electronic device, comprising:
a semiconductor substrate; ~~and~~
an electrically conductive layer disposed on at least one side of the semiconductor substrate,
comprising;
a voltage reference plane substantially covering the at least one side of the semiconductor
substrate and configured for operable coupling to a voltage reference signal;
a plurality of signal trace slots ~~formed~~ disposed in the voltage reference plane; and
a plurality of signal traces disposed in the plurality of signal trace slots;
wherein the plurality of signal traces are electrically isolated from the voltage reference
plane by a gap in the electrically conductive layer with a gap distance sufficient to
avoid an electrical short between the plurality of signal traces and the voltage
reference plane; and
wherein the voltage reference plane ~~forms~~ provides a continuous electrical connection
around each of the plurality of signal trace slots such that at least a portion of the
voltage reference plane is disposed between any two of the plurality of signal
traces to reduce cross talk between signals carried by the any two of the plurality
of signal traces; and
a plurality of solder balls disposed on the at least one side of the semiconductor substrate,
wherein at least one of the plurality of solder balls is operably coupled to at least one of

the plurality of signal traces and at least one of the plurality of solder balls is operably coupled to the voltage reference signal.

25. (Previously Presented) The electronic device of claim 24, further comprising a passivation layer disposed on the electrically conductive layer.

26. (Currently Amended) The ~~printed circuit board~~ electronic device of claim 24, wherein at least one of the plurality of signal traces includes at least one direction change in the length thereof over the semiconductor substrate.

27. (canceled)

28. (Currently Amended) The ~~printed circuit~~ electronic device board of claim 24, wherein the semiconductor substrate includes:

an electrically insulative layer disposed on the electrically conductive layer; and
an additional electrically conductive layer disposed on the electrically insulative layer,
comprising;

an additional voltage reference plane substantially covering the electrically insulative layer and configured for operable coupling to the voltage reference signal;
a plurality of additional signal trace slots ~~formed~~ disposed in the additional voltage reference plane; and

a plurality of additional signal traces disposed in the plurality of additional signal trace slots;

wherein the plurality of additional signal traces are electrically isolated from the additional voltage reference plane by an additional gap in the additional electrically conductive layer with an additional gap distance sufficient to avoid an electrical short between the plurality of additional signal traces and the additional voltage reference plane; and

wherein the additional voltage reference plane ~~forms~~ provides a continuous electrical connection around each of the plurality of additional signal trace slots such that at least a portion of the additional voltage reference plane is disposed between any two of the plurality of additional signal traces to reduce cross talk between signals carried by the any two of the plurality of additional signal traces.

29. (Currently Amended) The ~~printed circuit board~~ electronic device of claim 28, wherein at least a portion of the plurality of signal traces are operably coupled to at least a portion of the plurality of additional signal traces by vias ~~formed~~ provided through the electrically insulative layer.

30. (Currently Amended) The ~~printed circuit board~~ electronic device of claim 28, wherein the voltage reference ~~planed~~ plane is operably coupled to the additional voltage reference plane by vias ~~formed~~ provided through the electrically insulative layer.

31. (Currently Amended) An electronic system, comprising:
a processor;
a memory device;
at least one input device;
at least one output device; and
at least one data storage device;
wherein at least one of the processor, the memory device, the at least one input device, the at least one output device and the at least one data storage device includes a ~~printed circuit board~~ an electronic device comprising:
a semiconductor substrate; and
an electrically conductive layer disposed on at least one side of the semiconductor substrate, comprising;

a voltage reference plane substantially covering the at least one side of the semiconductor substrate and configured for operable coupling to a voltage reference signal;

a plurality of signal trace slots ~~formed~~ disposed in the voltage reference plane;

and

a plurality of signal traces disposed in the plurality of signal trace slots;

wherein the plurality of signal traces are electrically isolated from the voltage reference plane by a gap in the electrically conductive layer with a gap distance sufficient to avoid an electrical short between the plurality of signal traces and the voltage reference plane; and

wherein the voltage reference plane ~~forms~~ provides a continuous electrical connection around each of the plurality of signal trace slots such that at least a portion of the voltage reference plane is disposed between any two of the plurality of signal traces to reduce cross talk between signals carried by the any two of the plurality of signal traces; and

a plurality of solder balls disposed on the at least one side of the semiconductor substrate,

wherein at least one of the plurality of solder balls is operably coupled to at least one of the plurality of signal traces and at least one of the plurality of solder balls is operably coupled to the voltage reference signal.